

Many-body quantum magic 2024 (MBQM2024) Schedule

Location: Auditorium, Technology Innovation Institute (TII) Yas Office (opposite Warner Bros. World), Abu Dhabi

Website: <https://mbqm.tii.ae/>

Date	18.11.2024	19.11.2024	20.11.2024
8:00 - 8:45	Registration		
8:45 - 9:15	Opening session		
	Chair: Tobias Haug	Chair: Ryuji Takagi	Chair: Mario Collura
9:15 - 10:00	Mark Howard <i>An overview of Stabilizers and Magic</i>	Alioscia Hamma <i>Complexity, Entanglement, and Stabilizer entropy</i>	Marcello Dalmonte <i>Magic in gauge theories and tensor network states</i>
10:00 - 10:30	Fuchuan Wei <i>Noise robustness and threshold of many-body quantum magic</i>	Lorenzo Leone <i>Clifford group commutant revisited: t-design and stabilizer entropy</i>	Ryuji Takagi <i>Mixed-state additivity properties of magic monotones based on quantum relative entropies for single-qubit states and beyond</i>
10:30 - 11:00	Break	Break	Break
	Chair: Emmanuele Tiritò	Chair: Pavel Kos	Chair: Gerald Fux
11:00 - 11:30	Tyler Ellison <i>Stabilizer models of gapped quantum phases of matter</i>	Salvatore F.E. Oliviero <i>Magic-induced computational separation in entanglement theory</i>	Oliver Hahn <i>Bridging magic and non-Gaussian resources via Gottesman-Kitaev-Preskill encoding</i>
11:30 - 12:00	Poetri Sonya Tarabunga <i>A nonstabilizerness monotone from stabilizerness asymmetry</i>	Mario Collura <i>Entanglement and Magic in quantum many-body systems: new insights from matrix product states</i>	Martin Savage <i>Quantum Simulations of Standard Model Physics</i>
12:00 - 12:30	Pavel Kos <i>Magic generation in the dual-unitary XXZ model</i>	Guglielmo Lami <i>Magic and Anticoncentration in Matrix Product States</i>	Caroline Robin <i>Entanglement and Magic in Quantum Systems: From Few-Body Physics to Many-Body Collectivity</i>
12:30 - 14:00	Lunch	Lunch	Lunch
	Chair: Xhek Turkeshi	Chair: Mark Howard	Chair: Alioscia Hamma
14:00 - 14:30	Piotr Sierant <i>Magic spreading in random quantum circuits</i>	Mingpu Qin <i>Augmenting Density Matrix Renormalization Group with Clifford Circuits</i>	Wen Wei Ho <i>Deep thermalization and generalized maximum entropy principles</i>
14:30 - 15:00	Nobuyuki Yoshioka <i>Fast computation of magic monotones</i>	Gerald Fux <i>Disentangling unitary dynamics with classically simulable quantum circuits</i>	Closing session
15:00 - 15:30	Break	Break	
	Chair: Wen Wei Ho	Chair: Lorenzo Leone	
15:30 - 16:00	Soovin Lee <i>Efficient Quantum Algorithms for Stabilizer Entropies</i>	Benjamin Beri <i>Dynamical Magic Transitions in Monitored Clifford+T Circuits</i>	
16:00 - 16:30	Ingo Roth <i>Magic and the stability of classical shadows under gate-dependent noise</i>	Arash Ahmadi <i>Magic of Fluctuations: From Fluctuations in Quantum Information to Magic Resource</i>	
16:30 - 17:00	Poster session	Free discussion	
17:00 - 17:30	Poster session	Free discussion	
17:30 - 18:00	Poster session	Free discussion	
18:30 - 22:00		Workshop dinner Yas Acres Golf Club - "Black room"	